AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-10 (canceled).

11. (currently amended): A communications node ~~(N1, N3, N4)~~ of a backed up ring optical telecommunications network, comprising:

an optical fiber section ~~(2e, 2e, 2f)~~ for transporting optical signals ~~(s1, s2)~~, and

extraction means ~~(10, 30, 40)~~ for extracting optical signals transported by the fiber section,

~~characterized in that~~wherein, to allow the use of the same section of fiber in one direction ~~(s1)~~ when the network is in a normal transmission state and in the opposite direction ~~(s2)~~ when the network is in a backed up transmission state, the extraction means ~~(10, 30, 40)~~ are of ~~the~~ a power coupler type and are bidirectional,

and wherein ~~in that it~~ the communications node further comprises:

switching means ~~(11, 31, 41)~~ for directing optical signals extracted by the extraction means, and

control means ~~(12, 32, 42)~~ for detecting the transmission state of the network and controlling the switching means as a function of that state.

12. (currently amended): ~~A~~ The communications ~~node (N1, N3, N4)~~ according to claim 11, ~~characterized in that it comprises~~further comprising an optical gate ~~(13, 33, 43)~~ controlled by the control means ~~(12, 32, 42)~~ and inserted into the fiber section ~~(2c, 2e, 2f)~~ to pass or eliminate optical signals.

13. (currently amended): A communications node ~~(N1, N3, N4)~~ of a backed up ring optical telecommunications network, comprising:

an optical fiber section ~~(6c, 6e, 6f)~~ for transporting optical signals, and

insertion means ~~(100, 300, 400)~~ for inserting optical signals into the fiber section,

~~characterized in that~~wherein, to allow the use of the same section of fiber in one direction ~~(s1)~~ when the network is in a normal transmission state and in the opposite direction ~~(s2)~~ when the network is in a backed up transmission state, the insertion means ~~(100, 300, 400)~~ are of ~~the~~ power coupler type and are bidirectional,

and wherein ~~in that it~~ the communications node further comprises:

switching means ~~(110, 310, 410)~~ for directing optical signals to be inserted into the fiber section toward the insertion means, and

control means ~~(120, 320, 420)~~ for detecting the transmission state of the network and controlling the switching means as a function of that state.

14. (currently amended): An amplified communications node ~~(N2, N5)~~ of a backed up ring optical telecommunications network, comprising:

at least one optical fiber section ~~(2d, 6d, 2g, 6g)~~ for transporting optical signals, and

amplifier means ~~(24, 240, 54, 540)~~ for ~~each~~ said fiber section inserted into ~~the associated~~said fiber section to amplify optical signals,

~~characterized in that~~wherein, to allow the use of ~~the same~~ said ~~section of~~ fiber in one direction ~~(s1)~~ when the network is in a normal transmission state and in the opposite direction ~~(s2)~~ when the network is in a backed up transmission state, ~~it~~ the amplified communications node further comprises:

switching means ~~(21, 210, 51, 510)~~ for ~~each~~ said fiber section, inserted into ~~the associated~~said fiber section, for directing optical signals toward the associated amplifier means, and

control means ~~(22, 220, 52, 520)~~ for detecting the transmission state of the network and controlling the switching means as a function of that state.

15. (currently amended): ~~An~~ The amplified communications node ~~(N2, N5)~~ according to claim 14, ~~characterized in that it comprises~~further comprising power coupler type extraction means ~~(20, 50)~~ for extracting downlink optical signals transported by the fiber section of the network ~~(2d, 2g)~~ dedicated to transporting downlink signals.

16. (currently amended): ~~An~~ The amplified communications node according to claim 14, ~~characterized in that it comprises~~further comprising power coupler type insertion means ~~(200, 500)~~ for inserting uplink optical signals into the fiber section of the network ~~(6d, 6g)~~ dedicated to transporting uplink signals.

17. (currently amended): A traffic concentrator ~~(H1, H2)~~ of a backed up ring optical telecommunications network, ~~characterized in that~~wherein, to allow the same section of fiber to be used in one direction ~~(s1)~~ when the network is in a normal transmission state and in the opposite direction ~~(s2)~~ when the network is in a standby transmission state, ~~it~~ the traffic concentrator comprises:

two separate sections of a first optical fiber ~~(2a, 2b, 2a', 2b'),~~

first switching means ~~(110A to 112B)~~ connected to one end of each of the sections of the first fiber to inject into these two ends substantially identical optical signals addressed to nodes of the network,

two separate sections of a second fiber,

second switching means ~~(600)~~ connected to one end of each of the sections of the second optical fiber to selectively receive via a first one or second one of those two ends an optical signal sent by a node of the network, and

control means for detecting the transmission state of the network and controlling the switching means as a function of that state.

18. (currently amended): ~~A~~The traffic concentrator ~~(H1)~~ according to claim 17, ~~characterized in that~~wherein the first switching means ~~(110A to 112B)~~ comprise optical switches operating two by two.

19. (currently amended): ~~A~~ The traffic concentrator ~~(H2)~~ according to claim 17, characterized in that the second switching means ~~(600)~~ comprise three-state optical switches forming a quadripole A, B, C, D and allowing optical signals to propagate between the four poles in any of the following three propagation modes:

between the poles A and B, on the one hand, and between the poles C and D, on the other hand, corresponding to a direct propagation mode;

between the poles A and C, on the one hand, and between the poles B and D, on the other hand, corresponding to a crossed propagation mode;

between the poles A and D, on the one hand, and between the poles B and C, on the other hand, corresponding to a transparent propagation mode.

20. (new): A communications node of a backed up ring optical telecommunications network, comprising:

an optical fiber section for transporting optical signals, and

a bidirectional power coupler type for extracting optical signals transported by the fiber section,

wherein, to allow the use of the same section of fiber in one direction when the network is in a normal transmission state and in the opposite direction when the network is in a backed up transmission state, the communications node further comprises:

switching means for directing optical signals extracted by the extraction means, and

control means for detecting the transmission state of the network and controlling the switching means as a function of that state.

21. (new): The communications node according to claim 11, wherein the power couple samples a fraction of a wavelength division multiplexed signal.

22. (new): The communications node according to claim 13, wherein the power couple samples a fraction of a wavelength division multiplexed signal.

23 (new): The amplified communications node according to claim 14, wherein the switching means include a 2x2 optical switch having a first pair of ports connected to said amplifier means and a second pair of ports connected to two portions of said fiber section, wherein the 2x2 optical switch has a direct propagation mode and a crossed propagation mode which correspond to mutually reversed cross-connections between the first and second pair of ports.